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## PRODUCT INFORMATION (PI)

### 1. Product description

#### 1.1 Product status

The TE 35 with TE-T is an new, additional class of lightweight and universal combihammer.

#### 1.2 Product description

The main features of this new class of combihammer are universality, high operating comfort at a high quality level.

#### Why is this new combihammer so universal?

On the market at the moment, mainly the smaller SDS-plus (TE-C) hammers and the larger SDS-max hammers can be found. SDS max insert tools cannot be used in SDS- plus machines because they are not powerful enough, i.e. the impact energy. Combihammers/hammer drills with SDS-max, on the other hand, have too much power for the small SDS-plus connection end, i.e. drill bits break or are badly worn. Thanks to the intermediate TE-T connection end combined with the TE 35 combihammer, it has become possible to cover a large part of the SDS-max drill bit range with TE-T insert tools and also to use the smaller SDS-plus drill bits thanks to the interchangeable TE-C chuck . Apart from this extended range of usable drill bits, the TE 35 has the following features:

- o Hammering cut-out,e.g. for drilling through tiles
- o Integrated chiselling function for powerful chiselling with TE-T chisels
- o Electronic speed switch for precise hole starting
- o Interchangeable chuck system which enables the operator to mount a quick-release chuck for drilling into wood and steel

Due to the high power of the TE 35, it was not possible to take over the TE-C chuck and quick-release chuck of the TE 1, 5 or 15 (larger contact surface between chuck and machine). The TE-T and TE-C chucks have a supplementary built-in locking system to keep the chuck on the machine. For this reason, it is necessary for the chuck to be opened before it can be removed from the machine (see instruction manual).

## Why is operation of this new TE35 with TE-T system so comfortable?

### Low weight

The new TE-T insert tools have a connection end diameter 4 mm smaller than that of the TE-Y (14 mm opposed to 18 mm for TE-Y). This has made it possible, without making quality concessions, for a much more compact hammering mechanism to be built in and thus for the machine weight to be considerably reduced ( +/- 1 kg lighter than a Bosch GBH5DSC). Furthermore, the insert tools themselves are lighter than SDS-max (25 to 40% lighter than comparable SDS-max insert tools). This low weight and the compact dimensions, make operation of this new class of combihammer extremely comfortable and the machine easy to work with.

### TE 2000 grip

The TE 35 has the same grip as the TE 25 with the following advantages :

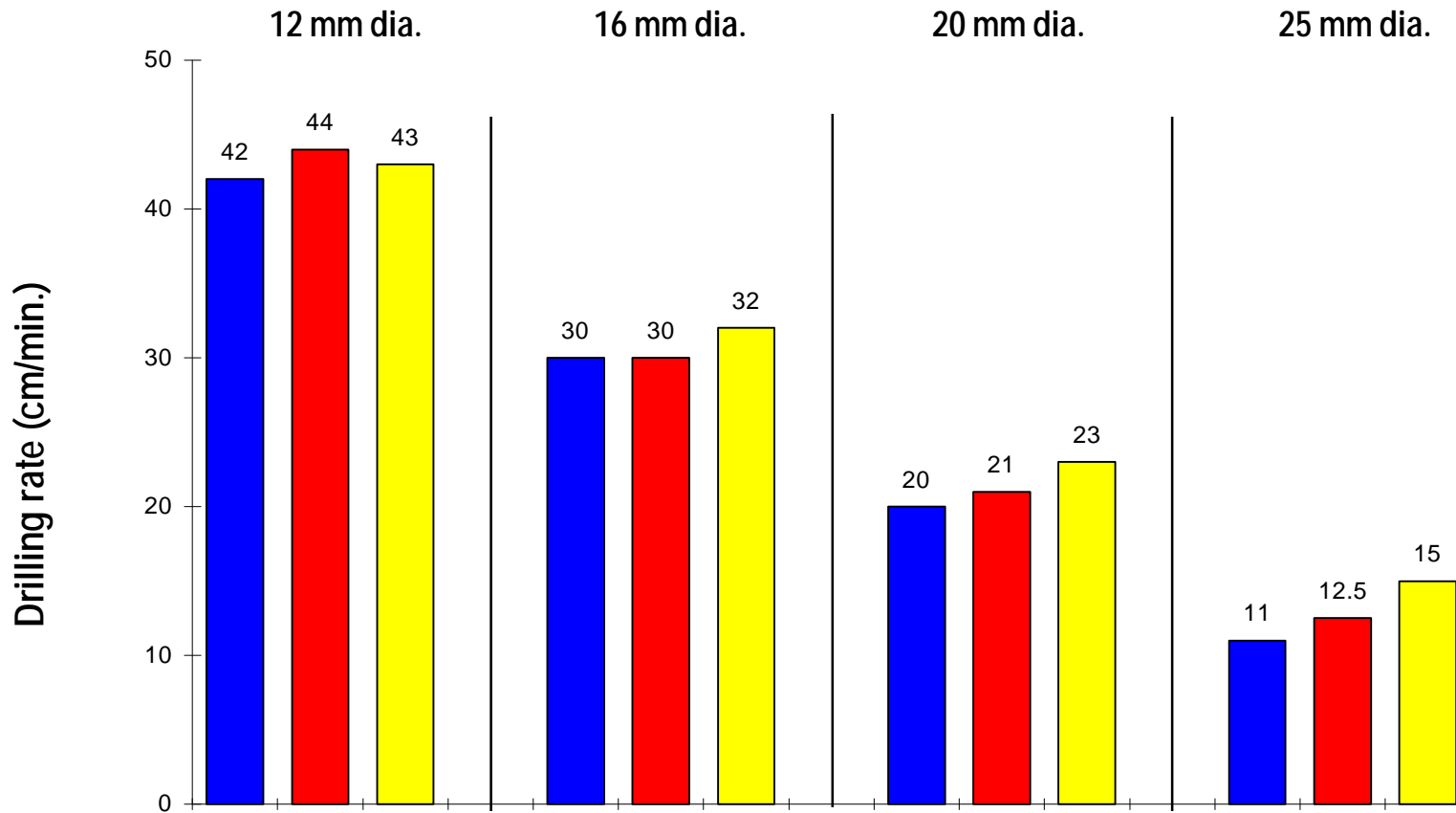
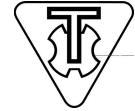
- o Electronic speed switch that can be operated when working in any direction. (This allows the user to support the machine with his leg on a large contact surface.)
- o Vibration-absorbing rubber padding
- o Design that fits perfectly in the hand.

### Multi-function switch

To simplify handling, selection of all functions has been incorporated in one switch. For security reasons (to prevent unintentional switching from chiselling to drilling) the red button on the switch must be pressed before a different function can be selected.

# TE 35 / TE-T - the powerful class of combihammer.

*Rate of drilling.*



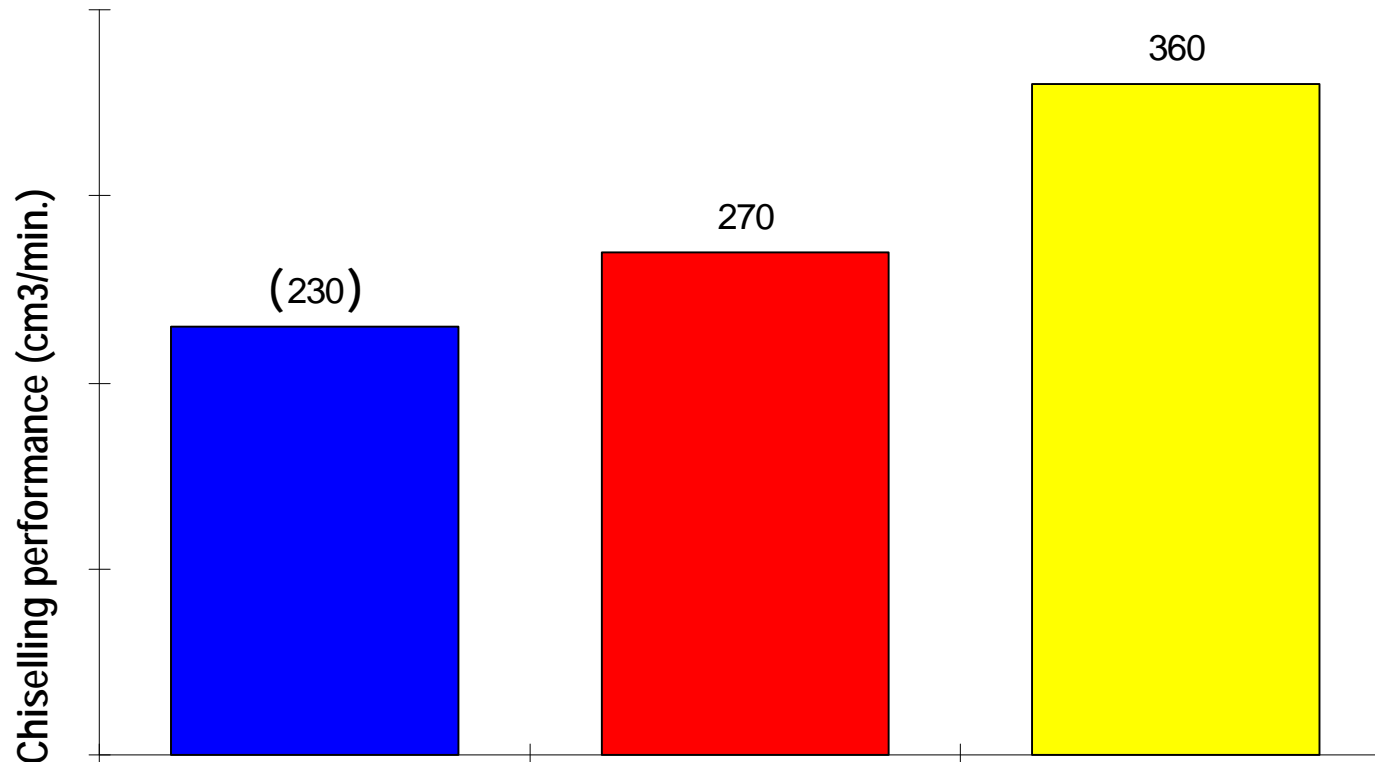
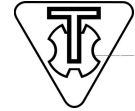
- TE 25
- TE 35
- TE 55

TE 35: A high rate of drilling over the entire drill bit size range.  
TE 55: Clearly better rate of drilling with and above 20 mm dia.



# The powerful TE 35 / TE-T.

*Chiselling performance.*



- TE 25
- TE 35
- TE 55

TE 35: A "genuine" combihammer.  
TE 25: Only suitable for limited corrective work using a chisel adaptor.

# The positioning of the TE-35 / TE-T is between TE 25 / TE-C and TE 55 / TE-Y. *Comparison of technical data:*



Technical data	TE 25	TE 35	TE 55
Power input	830 W	830 W	900 W
Current input	3.8 A	3.8 A	4.2 A
Frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Machine weight (incl. chuck)	4.9 kg	4.95 kg	5.9 kg
Speed under load	1st speed: 0 - 310 r.p.m. 2nd speed: 0 - 640 r.p.m.	0 - 620 r.p.m.	1st speed: 0 - 230 r.p.m. 2nd speed: 0 - 480 r.p.m.
Hammering speed under load	0 - 3720 blows/min.	0 - 3720 blows/min.	0 - 2630 blows/min.
Recommended drill bit sizes	12 - 20 mm dia.	12 - 25 mm dia.	16 - 32 mm dia.
Single impact energy	3.8 Joule	3.8 Joule	100%: 6 Joule / 50%: 3 Joule
Dimensions (L x B x H)	440 x 220 x 100 mm	460 x 220 x 100 mm	440 x 230 x 90 mm
Supply cord length	4 m	4 m	4 m

### 3. Uses / applications

The ideal uses for this new class of combihammer are :

#### Drilling

- o Drilling anchor holes 12 to 32 mm in diameter
- o Drilling through-holes 12 to 25 mm in diameter
- o Coring 50 to 68 mm in diameter

#### Chiselling

- o Enlarging openings for pipe runs/cable trays
- o Slitting in masonry
- o Removing concrete or masonry after diamond slitting
- o Corrective chiselling
- o Making small openings...

In addition, following applications can also be carried out :

- o Drilling small anchor holes from 6 to 10 mm in diameter with TE-CX drill bits  
Owing to the lower r.p.m. of the TE 35, it is highly recommended that TE-CX drill bits be used which remove dust much better than other drill bits.
- o Drilling into wood and steel with the quick-release chuck
- o Drilling through tiles with rotary action only (hammering cut-out function) and electronic speed switch
- o Coring sporadically 82 mm and 90 mm in diameter
- o Drilling through-holes from 28 to 40 mm diameter

### 3.1 Comments

#### 3.1.1 Use of TE-C drill bits in the TE 35

The TE 35 is designed to use TE-T drill bits. If small-diameter anchor holes have to be drilled, TE-CX drill bits can be used (from the 6 mm diameter). The use of TE-C drill bits with a larger diameter is not recommended because of the machine's high power which would cause earlier wear of connection end and chuck.

#### 3.1.2 Use of TE-C chisels in the TE 35

The use of TE-C chisels in the TE 35 is not recommended. The high power level of the TE 35 causes early failure of TE-C chisels (above all, the connection end breaks after an average of five hours in use).

### 3.1.3 Use of TE-T drill bits in the TE 24 / 25

To be even more active when penetrating the market with the TE-T connection end, we are also making a TE-T chuck available for the TE 24 / 25. The main advantage is the longer life expectancy of TE-T drill bits as a result of avoiding connection end breakage / wear with the medium and larger sizes of drill bit, and also the better resistance on drilling against rebars. (See also the other advantages given on page 6 in the MI section of the Compass papers.) The difference in drilling performance between TE-C and TE-T is minimal (the larger size of the TE-T connection end cancels out the advantages of improved drilling dust removal).



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**Caution:** The following fundamental safety precautions must always be observed when using electric tools/machines as protection against and electric shock, the risk of injury and fire hazards. Please read and take note of these precautions before you use the tool/machine. Keep these safety precautions in a safe place!

**1** Keep your place of work clean and tidy. Disorder where you are working creates a potential risk of accidents.

**2** Make allowance for influence from the surroundings. Don't expose your electric tools/machines to rain. Don't use electric tools/machines in damp or wet surroundings. Make sure the work area is well lit. Don't use electric tools/machines near inflammable liquids or gases.

**3** Always protect yourself against electric shock. Never touch grounding (earthing) parts e.g. pipes, radiators, cookers, ovens, refrigerators.

**4** Keep children away. Don't let other persons touch the electric tool/machine or supply cord. Keep them away from your work area.

**5** Keep your electric tool/machine in a safe place. Electric tools/machines not in use should be kept in a dry locked-up place out of the reach of children.

**6** Don't overload your electric tools/machines. You will do your work better and safer in the specified performance/rating range.

**7** Always use the right electric tool/machine for the job. Don't use underpowered tools/machines or attachments for heavier duty jobs. Don't use electric tools/machines for work and purposes for which they are not intend-

ed, e.g. don't use a hand-held circular saw to cut down trees or cut up branches.

**8** Wear suitable clothing. Don't wear loose clothing or jewellery – they could be caught up in moving parts. When working outside, the use of rubber gloves and non-slip shoes is recommended. Wear a helmet or cap if you have long hair.

**9** Always wear protective goggles. If work causes dust, wear a mask as well.

**10** Don't use the supply cord for any other purpose. Don't carry the electric tool/machine by the supply cord and don't pull the plug out of the socket/receptacle by pulling the supply cord. Protect the cable from heat, oil and sharp edges.

**11** Secure the workpiece. Use a clamping device or vice to hold the workpiece. It is secured more reliably in this way than in your hand and you can then hold and operate your electric tool/machine with both hands.

**12** Don't bend over too far when working. Avoid an unusual stance. Make sure that you are standing firmly and keep your balance at all times.

**13** Take good care of your electric tools/machines. Keep the drill bits, insert tools etc. sharp and clean so that you can do your work better, safer and more reliably. Observe the cleaning and maintenance regulations and the instructions for changing drill bits, insert tools etc. Check the supply cord regularly and have it renewed by a recognized specialist if it is damaged. Check the extension supply cord regularly and, if it is damaged, replace it. Keep grips and side handles dry and free from oil or grease.

**14** Always pull out the plug from the mains if the electric tool/machine is not in use, prior

to cleaning and maintenance work and when changing a drill bit, saw blade or insert tools of any kind.

**15** Never leave a key in place. Always check before switching on that the key or adjusting tools have been removed.

**16** Avoid any unintentional start-up. Never carry a plugged-in electric tool/machine with your finger on the switch. Always make sure that the switch is off when plugging the electric tool/machine into the main electric supply.

**17** If an extension supply cord is used outside, only use one which has been approved for the purpose and is correspondingly marked.

**18** Be attentive at all times. Keep your eye on your work. Remain in a sensible frame of mind and don't use the electric tool/machine if you cannot concentrate completely.

**19** Check your electric tool/machine for damage. You must check the safety devices or damaged parts carefully for perfect functioning in keeping with the intended purpose before using the electric tool/machine further. Check whether the moving parts function properly, whether they aren't sticking, whether any parts are broken, whether all other parts work properly and are fitted correctly, and make sure that all other conditions which can influence operation and running of the electric tool/machine are as they should be. Damaged guards and protective devices and parts must be repaired properly by an authorized service workshop or replaced provided that nothing else is stated in the operating instructions. Damaged switches must also be replaced in the recognized service workshop. Never use electric tools/machines which cannot be switched on and off by the switch.

**20** Caution ! For your own safety's sake, on-

ly use accessories and attachments which are specified in the operating instructions or in the respective catalogue. The use of accessories or insert tools or attachments other than those specified in the operating instructions can result in personal injury to you.

**21** Only have repairs carried out by recognized electrical specialists. This electric tool/machine complies with respective safety regulations. Repairs may only be carried out by an electrical specialist otherwise an accident hazard for the operator can exist.

**22** Connect dust extraction equipment. If devices are provided for the connection of dust extraction and collection facilities ensure these are connected and properly used.

**23** Locking the chuck: Check that insert tools (chisels, drill bits) are properly secured in the chuck.

**24** When working on electrically conductive materials, conductive dust may collect inside an electric tool, causing leakage of electric voltage and a possible risk of electric shock. Work of this kind, for example, includes grinding cast iron, chiselling or other operations using impact tools on solid metal, overhead drilling in metal and, under certain conditions, drilling through steel reinforcement in concrete ceilings. Electric tools or machines used for applications of this kind must be inspected at regular, short intervals by a recognised specialist or at a Hilti service workshop in order to ensure that no hazardous deposits of conductive dust are present inside the tool and to confirm the integrity of the tool's electrical insulation.

**Please keep these safety precautions in a safe place.**

# Hilti TE35 Combihammer



Always wear ear protectors.



Always wear protective gloves.



Always wear safety glasses.

## EC declaration of conformity

Description:	Combihammer
Serial no.:	XX/0000001-9999999/XX
Designation:	TE35
Year of design:	1998

We declare, under our sole responsibility, that this product complies with the following standards or standardization documents:

EN 50144, EN 55014, EN 60555 according to the provisions of the directives 73/23/EEC, 89/336/EEC, 89/392/EEC

### Hilti Aktiengesellschaft

Dr. Bruno Claus  
Drilling and Demolition Marketing  
manager

1/1998

Dr. Heinrich Schäperkötter  
Leiter Entwicklung Bohrmontage  
Development manager D&ET  
division  
1/1998

## Technical data

Input power:	830 W					
Voltage (versions):	100 V	110 V	120 V	220 V	230 V	240 V
Input current:	8.7 A	7.9 A	7.2 A	3.9 A	3.8 A	3.6 A
Frequency:	50-60 Hz					
Weight of machine:	4.96 kg					
Dimension:	460×110×200 mm					
Speed under load:	0-620 r.p.m.					
Hammering under load:	0-3720 blows/min.					
Single impact energy:	3.8 Joules					
Drilling diameter range in concrete:	6-40 mm dia.					
Recommended diameter range:	12-25 mm dia.					
Drilling performance in medium-grade concrete with 12 mm dia. drill:	16 mm dia. = 60 cm <sup>3</sup> /min. $\Delta$ 300 mm/min.					
TE-T-T drill bit:	12-32 mm dia.					
TE-T-GB drill bit:	40 mm dia.					
TE-T-BK percussive core bit:	50-90 mm dia.					
Chuck type:	TE-T					
TE-C interchangeable chuck for TE-CX hammer drill bits						
Quick-release chuck for drill bits for wood and steel						
Chisels: pointed, flad, wide-flat, channel, mortar and joint chisels						
Automatic cut-out brushes						
Double insulation, class II, as per EN 50144, part 1 and 2						
This electric tool is radio and TV suppressed in compliance with the Directive of the European Communities EN 55014						
Slip clutch as per EN 50144 §8						
Dust-tight enclosure, central and permanent lubrication (maintenance free)						
Variable speed switch						
Side handle adjustable with depth gauge						
Typically the A-weighted noise levels of the tool are:						
- sound pressure level:	87 dB (A)					
- sound power level:	100 dB (A)					
Wear ear protection.						
The typical weighted acceleration is 10 m/s <sup>2</sup> .						
Right of technical modifications reserved						

**Do not use this product in any way other than as directed by these operating instructions. The respective regulations of your trade association and the enclosed safety precautions must be observed. The operating instructions should always be kept with the machine!**

## Please note before start-up

When in operation, the machine should be held securely with both hands on the grips provided. Always ensure that you work from a secure stance.

1. The electric supply must comply with the data printed on the machine's rating plate.
2. This machine is double insulated and may not be grounded (earthed).
3. Do not exert undue pressure on the machine. This will not increase its performance. Just position the bit and guide it into the hole.

### Read the enclosed Safety Precautions.

#### Lubrication of chuck

The chuck is not incorporated in the lubricating system of the machine. The drill bit connection end, therefore, must be cleaned regularly and lubricated sparingly with Hilti grease.

**Note: The use of TE-C chisels is not recommended.**

## Operating:

#### Fig. 1: Insertion of drill bit

Turn chuck to the left (symbol ◀). Insert drill bit in any position until resistance is felt. Then turn it until it moves in farther. Turn chuck to right and lock drill bit in place (symbol ▶).

#### Fig. 2: Rotary hammer drilling

Rotary hammer drilling in concrete, masonry and natural stone. Press the red lockbutton on the switching lever. Turn the switching lever to the "rotary hammer drilling" position (symbol ⚡) until the lockbutton engages.

#### Fig. 3: Drilling without hammering action

Press the red lockbutton on the switching lever. Turn the switching lever to the "rotary drilling"

position (symbol ⚙) until the lockbutton engages. In this position, the insert tool simply rotates with no hammering action.

#### Fig. 4: Chisel adjustment

Press the red lockbutton on the switching lever. Turn the switching lever to the "chisel adjustment" position (symbol ⚡) until the lockbutton engages.

#### Fig. 5: Chiselling function

Secure the chisel in the desired position and select the chiselling function. Press the red lockbutton on the switching lever. Turn the switching lever to the "chiselling" position (symbol ⚡) until the lockbutton engages.

#### Fig. 6: Changing the chuck

Turn chuck to the left (symbol ◀). Pull forward sleeve and completely remove chuck. When attaching chuck, pull forward sleeve and hold it there. Press chuck onto guide tube as far as it will go. Release sleeve. Turn chuck until steel balls snap into place.

**Note:** When a key-type chuck or a quick-release chuck is used, the hammering action is not transmitted to the insert tool (drilling without hammering action). However, for smoother running with less vibration it is recommended that the "drilling without hammering action" position (fig. 3) is selected.

#### Fig. 7: Side handle / depth gauge

The side handle can be pivoted and clamped in any desired position. Release the side handle by turning the grip counter clockwise, set the desired drilling depth with the depth gauge and then lock the side handle in position by turning the grip in a clockwise direction.

## Warranty

Hilti warrants that the tool supplied is free of defects in material and workmanship. This warranty is valid as long as the tool is operated and handled correctly, cleaned and serviced properly and in accordance with the Hilti Operating Instructions, all warranty claims are made within 12 months from the date of the sale (invoice date), and the technical system is maintained. This means that only original Hilti consumables, components and spare parts may be used in the tool.

This warranty provides the free-of-charge repair or replacement of defective parts only. Parts requiring repair or replacement as a result of normal wear and tear are not covered by this warranty.

**Additional claims are excluded, unless stringent national rules prohibit such exclusion. In particular, Hilti is not obligated for direct, indirect, incidental or consequential damages, losses or expenses in connection with, or by reason of, the use of, or inability to use the tool for any purpose. Implied warranties of merchantability or fitness for a particular purpose are specifically excluded.**

For repair or replacement, send tool and/or related parts immediately upon discovery of the defect to the address of the local Hilti marketing organization provided.

This constitutes Hilti's entire obligation with regard to warranty and supersedes all prior or contemporaneous comments and oral or written agreements concerning warranties.



## Additions/Changes (New)

### 1. Deliveries of the TE15-C and TE35 stopped between 19.10.98 and 23.10.98

During the course of a changeover in manufacturing concerning the switching lever (item no. 287394), it was discovered at the assembly line that the switching lever for the TE15-C and TE35 (same part) could not be used to select the various functions.

Consequently, assembly was stopped between October 19 and October 23, 1998, and no further machines were shipped.

This problem has been eliminated since October 24, 1998, and these products are again being shipped.

**As a result of the 100% test of switching functions during final assembly, it was ensured that no faulty machines left the assembly plant.**

In order to ensure that all switching levers 287394 held by the MOs as spare parts are unaffected by this fault, the entire spare part stocks of this old-type switching lever will be exchanged. The exchange campaign will be carried out during the next few days by the market service managers responsible. This will be done at no cost to the MOs.

The old-type switching levers must be disposed of (destroyed) immediately the new switching levers become available in the MOs.

We trust you understand the situation and would like to wish you continuing success with your sales efforts.

With best regards,

BMT / Jo Van Aert

## 2. Extension of TE-T Product Programme

Dear colleagues,

In order to make the TE35/TE-T system even more versatile, we now offer you 3 new insert tools with TE-T connection end:

1. TE-T SAS 8-16 for setting HVU chemical anchors: Item number 332168 (similar to item 60304, TE-C SAS 8-16)
2. TE-T 3/4" for use with 3/4" nuts: Item number 332169. (similar to item 32221, TE-Y 3/4")  
This adaptor can also be used with 1/2" nuts by using a 3/4" to 1/2" reduction (available in each standard wrench tool box).

The same setting instructions apply as for the TE 25.

3. TE-T KMG 2.5/29 scoop chisel (channel chisel with wings) for making grooves in hollow bricks: Item number 332664. Available in 1/99. (similar to item 30448, TE-Y KMG 3.6/28)

Due to the fact that we have received planning for these items from only few MOs, longer delivery periods might occur in the first months.

Regards,

BMT/ Jo Van Aert